

t90_card_3

(TMbLd85jYAn4e4AiDZcE4jbVbPLLuwpAsAz)

October 27, 2020

Let $v1_card_1 : \iota \Rightarrow o$ be given. Let $r1_ordinal1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_card_1 : \iota \Rightarrow \iota$ be given. Let $k1_card_1 : \iota \Rightarrow \iota$ be given. Let $v3_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (v1_card_1 X1) \Rightarrow ((X0 \in X1) \Rightarrow (k1_card_1 X0 \in X1)) \quad (1)$$

Assume the following.

$$\forall X0. (v3_ordinal1 X0) \Rightarrow (X0 \in k2_card_1 X0) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. ((v3_ordinal1 X0) \wedge (v3_ordinal1 X1)) \Rightarrow (r1_ordinal1 X0 X1) \Leftrightarrow (r1_tarski X0 X1) \quad (3)$$

Assume the following.

$$\forall X0. v1_card_1 (k2_card_1 X0) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Leftrightarrow (\forall X2. (X2 \in X0) \Rightarrow (X2 \in X1)) \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. (v1_card_1 X1) \Rightarrow ((X1 = k2_card_1 X0) \Leftrightarrow ((k1_card_1 X0 \in X1) \wedge (\forall X2. (v1_card_1 X2) \Rightarrow ((k1_card_1 X0 \in X2) \Rightarrow (r1_ordinal1 X1 X2)))))) \quad (6)$$

Assume the following.

$$\forall X0. (v1_card_1 X0) \Rightarrow (v3_ordinal1 X0) \quad (7)$$

Theorem 1

$$\forall X0. (v1_card_1 X0) \Rightarrow (\forall X1. (v1_card_1 X1) \Rightarrow ((X0 \in X1) \Leftrightarrow (r1_ordinal1 (k2_card_1 X0) X1)))$$